RITCHEY User Manual

Handlebars, Bar Ends, Aero Bars, Stems, Grips and Bar Tape

Important information about use, care, maintenance and installation.

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Some Notes On This Manual:

Pay particular attention to the following symbols:

This symbol means that your life or health may be in danger unless you comply with the instructions given or carry out the measures prescribed.

This symbol warns you about actions that could lead to damage of property or the environment.

This symbol signifies information about how to handle the product or refers to a passage in the operating instructions that deserves your special attention.

The possible consequences described above are not repeated every time one of the symbols appears!

Introduction

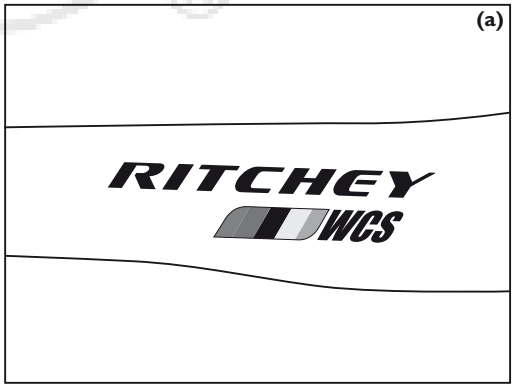
Congratulations on buying a RITCHEY component, you made a superb choice. We at RITCHEY develop, test and manufacture our products with dedication, and strive to uphold the highest standards of quality. Like all high quality sports equipment, RITCHEY components require careful installation in order to function properly and provide long-term service. We suggest you seek the assistance of a qualified mechanic at your local RITCHEY dealer. We also recommend using RITCHEY components together to ensure optimal performance and durability. Our precise tolerances for component compatibility are carefully monitored during production and quality control for easy and trouble-free installation.

This manual contains important notes about use, care, maintenance and installation.

Please read this manual, beginning with the general information, followed by the chapter specific to the component you have purchased or intend to use. This review will help ensure that installation and use of the product go more smoothly.

Retain this manual. If you sell or lend your component or bike, provide this manual to the new user.

With RITCHEY components, as is the case with all lightweight products, special care and attention are required for proper installation and intended use. Materials used by RITCHEY are extremely strong and durable, yet low in weight, making them perfect for high-performance applications. All materials, no matter how strong at the outset, are susceptible to becoming brittle due to vibration fatigue over time, or due to heavy impact. In the event of a crash, heavy impact or undue stress of any kind, the component may not show obvious signs of damage. However, since the material may have sustained serious internal damage, it is very dangerous to continue using the component after an impact or undue stress, because it could fail as a result, with unforeseeable consequences to your health or well being. Therefore consult your local RITCHEY dealer after such an occurrence to get a professional evaluation.



Before Your First Ride –Determined Use

Most RITCHEY handlebars, bar ends and stems are designed for use on road, triathlon/time trial, cyclo-cross or mountain bikes under normal riding and race conditions. They are not built for freeriding, dual slalom, boarder cross downhill, jumps and comparable use. For those types of use, you must opt for special RITCHEY SC -- "severe condition" -- components.

Never modify or change your handlebar, bar ends, stem or aero bars. Don't file or drill holes in any component, especially carbon parts, as it will compromise their structural integrity and void your warranty.

RITCHEY stems are only to be used with threadless headset systems, also called "aheadset*" systems. Attempting to use a RITCHEY stem in combination with a threaded fork can lead to sudden failure, resulting in a crash with unforeseeable consequences.

Take care to set up your bike so you are always able to easily reach the brake levers. Note that holding onto bar ends or aerobars while riding means it will take more time to reach the levers.

The RITCHEY Prologue Clip-on aerobars can be used on the 31.8 WCS Carbon Evo or 31.8 Pro Matrix Logic road handlebars, which are the only O/S road bars approved for use with clip-on bars. RITCHEY road bars with 25.8-26.0 diameters can accept clip-on aerobars.

We strongly recommend using RITCHEY parts together in order to achieve optimal function and component durability. If you intend to combine parts, i.e. use a handlebar or stem from another manufacturer, please ensure all dimensions correspond exactly with those listed in this manual, and consult the other manufacturers' user manuals regarding their restrictions!

The handlebars, bar ends, aero bars and stems are designed to carry a maximum rider's weight of 110 kilos (242 lbs)– luggage, eg backpack, included.

If you have any questions or concerns, contact your local RITCHEY retailer.

After a crash, accident or other major impact, replace the stem, handlebar, bar ends or aero bars for your own safety.

If your stem or handlebar makes any "creaking," "crackling" or "cracking" noises, or if there is visible damage, such as notches, tears, dents, discolorations, etc., do not use the bicycle until you have consulted your local RITCHEY dealer, who can check the part carefully and advise whether replacement is necessary.

*Aheadset is a registered trademark of the Dia-Compe company, which invented the threadless fork steerer tube headset system.

Special Characteristics of Carbon

As is the case with all RITCHEY products made of carbon composites, (a) your special care and attention is required.

Carbon is an extremely strong material which combines high resistance with low weight. Please note that carbon, unlike metals, shows no visible deformation after overstress even though sub-structures may be broken. This makes it very dangerous to continue using the part after an impact or undue stress, which may lead to an accident with unforeseeable consequences.

If your RITCHEY carbon part has sustained this kind of undue stress, we strongly recommend you take your complete bicycle to your local RITCHEY dealer for inspection, so you will know whether replacement is necessary. If there are any unanswered questions or doubts, he can contact RITCHEY directly, or one of our distributors.

RITCHEY components made of carbon must never be repaired; they must be discarded and replaced. Make absolutely sure that any damaged part is never re-used; it should be destroyed to ensure that re-use is impossible.

Parts made from carbon should never be subjected to excessive heat under any circumstances. Therefore, never paint a carbon item or attempt to cure it by heat. The required temperatures for enameling or powder-coating will cause the carbon bars to separate. Do not leave carbon items in a car in direct sunlight for prolonged periods or near sources of heat.

Items made of carbon have, like all lightweight parts, a limited service life. To be safe, RITCHEY recommends changing stems and handlebars, depending on usage, at intervals of three years, even if they were not involved in an accident or did not suffer a comparable impact.

Make sure all carbon clamping areas are absolutely free of grease and other lubricants. Grease will penetrate the surface of the carbon material, reducing the coefficient of friction and hence impairing the stability of joined parts. Greased carbon may never again provide a safe clamping surface. If you install carbon parts, use RITCHEY Liquid Torque to achieve optimum friction where parts connect. This will allow you to tighten bolts to prescribed torque limits and attain reliable, slip-free installation.

If any dents, deformation, discoloration, scratches or gouges are visible on your carbon part, or if it exhibits "creaking" or "crackling" noises, do not use the bicycle until the part has been replaced! After undue stress, a crash, accident or other major impact, replace the part or have it inspected by your local RITCHEY dealer before using.

Never use clip-on or aero bars with carbon handlebars, except where they are especially designed for this purpose, as with carbon Evo or Pro Matrix road bars.

Cleaning and Care

Clean handlebar, bar ends, stems, aero bars, and grips with water and a soft cloth. If necessary, use a non abrasive soap to remove grime. Only use gasoline based solvents for cleaning tough stains like oil or grease from hard surfaces. Do not use degreasing agents, which contain organic solvents (i.e. acetone, trichloroethylene, methylene, etc.). Chemicals of this sort may damage the finish or substructure of the material.

After drying your bike you can apply painted, carbon and metal surfaces with a hard wax **(a)**. Polish the parts after the wax has dried. With this treatment handlebars, bar ends, stems and aero bars will keep their nice finish for years.

While cleaning, look for cracks, scratches, dents, as well as bent or discolored material. If you think there may be a problem, see your local RITCHEY dealer. Have damaged or defective components replaced immediately.

Maintenance

Check all bolts after the first 200-400km (120 – 240 miles), then adjust as needed, keeping within the prescribed torque limits. Check every 2,000km (1,200 miles) thereafter.

General Notes on Installation

The installation of stems, handlebars, bar ends, grips, aero bars or bar tape is a job for a qualified mechanic. For your own safety, have your local RITCHEY dealer perform the installation and maintenance jobs outlined in this manual. Each of the following instructions must be followed with exactness. Failure to observe these guidelines can cause a component to fail, resulting in a crash or injury.

Installation of parts with differing tolerances can cause problems due to incompatibility or poor fit, and can lead to component failure, as well as accident or injury.

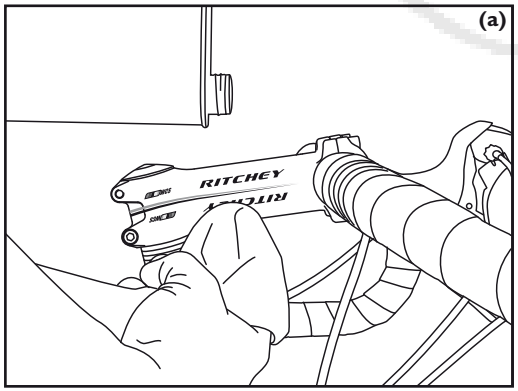
We recommend using only RITCHEY handlebars, aero bars, stems and bar ends together because they are designed to fit and function as an integrated whole. If you choose to use a part from another manufacturer, consult their product documentation regarding clamping sizes to ensure proper fit and usability with a RITCHEY component.

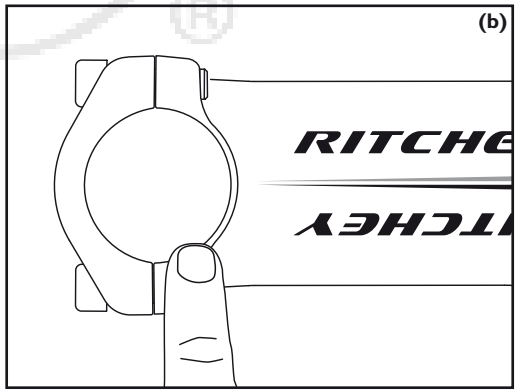
RITCHEY assumes no responsibility for problems resulting from a RITCHEY component being used with a part from another manufacturer.

Watch out for sharp burrs at clamping areas of stem **(b)**, bar ends and shifting/braking levers. Do not use stems or bar ends with burrs or sharp edges. If there are burrs or sharp edges on a RITCHEY or non-RITCHEY component, have your local RITCHEY dealer inspect it to see if it is usable, or whether the issue can be remedied and how.

If you fit a new handlebar to an existing stem, check the old handlebar for scratches or marks in the clamping area, which may serve as indicators of incompatible tolerances, quality issues or manufacturing defects.

Once it is determined that a component is damaged, it should not be used under any circumstances. Stop using the bicycle until the part has been replaced! If there is any doubt, we recommend replacing the part.





RITCHEY Liquid Torque

Installing components with RITCHEY Liquid Torque

Carbon fiber components are particularly vulnerable to damage caused by excessive clamping force. RITCHEY Liquid Torque **(c)** creates extra friction between two surfaces, allowing tightening torque to be reduced by up to 30%. This is especially useful in clamping areas, such as between a handlebar and stem, or fork steerer tube and stem, or bar ends and handlebars – three areas where too much clamping force can damage either component, causing component failure or voiding the warranty. By reducing clamping force, RITCHEY Liquid Torque relieves stress on sensitive carbon surfaces, preventing damage to fibers or the cracking of the carbon sub-structure. It also retains its effectiveness in wet conditions and provides maximum protection against corrosion.

RITCHEY Liquid Torque can be used for all carbon, aluminium and steel connections, including:

- Seatpost/frame interface area and seatpost bolt threads
- Stem/handlebar interface area and stem bolts
- Stem/fork interface area and bolt threads
- Bolt threads in any area where reliable clamp force is required, but where loosening with the appropriate tool should be easy, even after prolonged use. RITCHEY Liquid Torque is ideally suited because it does not harden.

Directions for use: Prior to applying Liquid Torque, remove dirt particles and lubricant residues from the surfaces to be treated. Next, apply a thin and even coat of RITCHEY Liquid Torque to the cleaned surfaces using a brush, lint free textile or chamois/artificial chamois. Install components as directed by the manufacturer, using a torque wrench (such as the RITCHEY Torqkey, recommended for use with all RITCHEY handlebars and stems), taking care not to exceed the manufacturer's maximum torque recommendations. After tightening to specified torque, wipe off any excess Liquid Torque. Re-seal container after use.

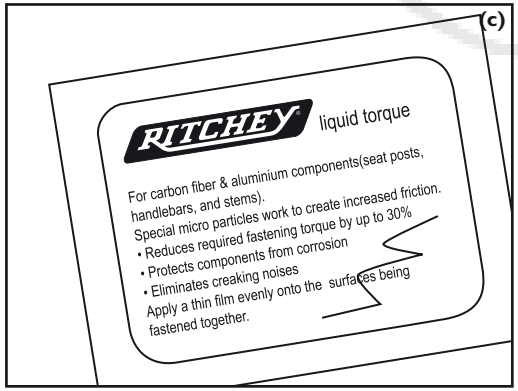
Additional information: Many manufacturer warranties will not cover damage to component due to over-tightening. Refer to manufacturer's recommended torque limits for each component. Always use a torque wrench to verify you are within specified torque limits, and do not exceed them. Using RITCHEY Liquid Torque will allow you to safely install your bicycle components – particularly in the case of carbon fiber – without exceeding the manufacturer's specified torque limits. In most cases, using Liquid Torque will enable you to use as much as 30% less torque while installing your components.

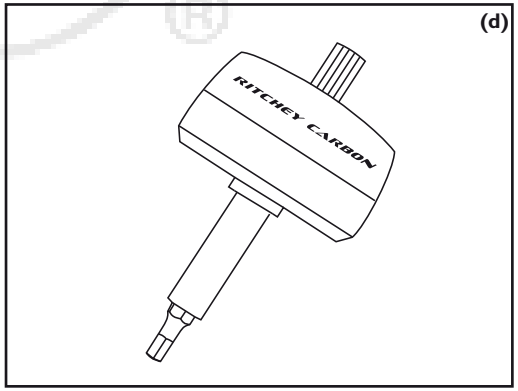
RITCHEY Liquid Torque is neutral to copper and aluminium alloys, steel and synthetic material, and will not damage product surfaces.

RITCHEY Torqkey

To achieve long lasting and problem free clamping of parts, RITCHEY considers the use of a torque wrench absolutely necessary. The RITCHEY Torqkey **(d)** is designed for use with all RITCHEY Mountain and Road handlebars and stems. It is a 4mm hex bolt/allen wrench pre-set to 5Nm, which is both the ideal clamp force, as well as the maximum prescribed torque, used to tighten RITCHEY stem bolts. If 5Nm of torque does not generate sufficient clamping force, apply RITCHEY Liquid Torque to interconnecting surfaces to increase friction. Exceeding 5Nm of torque on RITCHEY stem bolts will create too much clamping pressure, risking component failure and voiding the warranty.

Loose or overly tight bolts can lead to failure and therefore to an accident. Adhere to torque specifications carefully. If you do not have access to a standard torque wrench, or to a RITCHEY Torqkey where appropriate, see your local RITCHEY dealer.


(c)
RITCHEY
liquid torque
For carbon fiber & aluminium components(seat posts, handlebars, and stems).
Special micro particles work to create increased friction.
• Reduces required fastening torque by up to 30%
• Protects components from corrosion
• Eliminates creaking noises
Apply a thin film evenly onto the surfaces being fastened together.



Installation of Aheadset Stems

Many RITCHEY stems can be installed in either vertical orientation. These "flip-flop" models allow a handlebar to be positioned at two different heights by simply inverting the stem. **(a)**

Verify and ensure that the stem and fork steerer tube always have matching or compatible clamp diameters. **(b)**

Use a suitable diameter reduction spacer if using a RITCHEY stem on a fork with a 1" steerer tube.

Take care that the slot in the spacer is positioned to the rear. If you fit a new stem to an existing fork, check the steerer tube for existing indentations in the clamping area. If they exist, ask your local RITCHEY dealer to advise you if fork replacement is necessary.

Ensure that the clamping area is absolutely free of grease, especially when any clamping surfaces are made of carbon.

Use RITCHEY Liquid Torque to optimize clamp hold. Grease the head and threads of the stem's steerer clamp bolts. Keep lubricants away from clamping surfaces.

Slide the stem onto the fork steerer shaft. The stem must fit snugly on the fork steerer. Don't install stems where there is play between the two connecting surfaces.

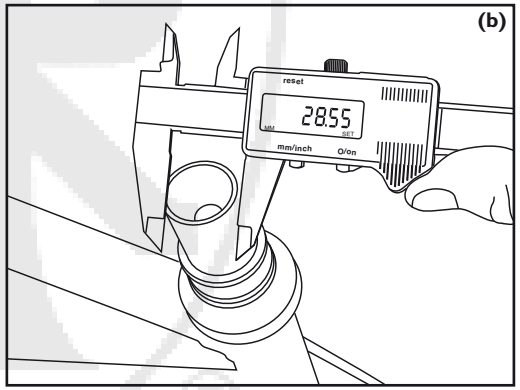
Depending on the length of the steerer tube and desired stem position, you may need to install spacers above the upper cup of the headset, and/or above the stem. **(c)**

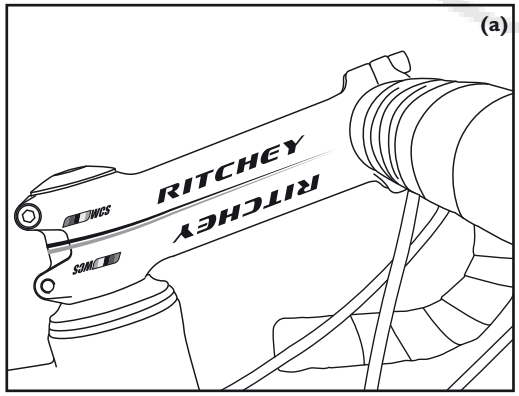
These spacers are available in different heights. The stack height must position the top of the steerer tube 2 mm below the top of the stem, or 2 mm below the top spacer installed above the stem. Make sure the steerer tube comes far enough up the inside of the stem that the distance from the top of the steerer to the top of the stem is no greater than 2 mm; this will ensure a secure connection between steerer tube and stem when the prescribed torque is applied to each of the clamp bolts.

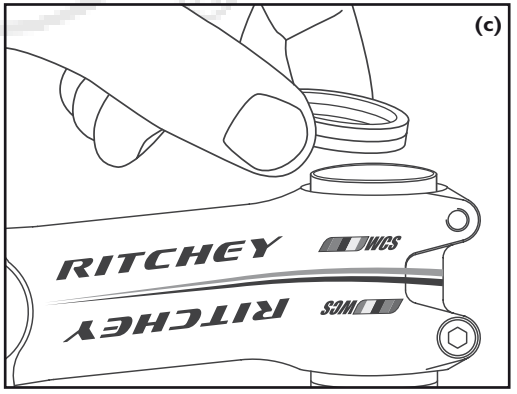
If your preferred stem height positions the stem down the steerer, causing the steerer tube to extend past the top of the stem, insert a spacer of appropriate height.

The gap between top of steerer tube and upper lip of stem must be no less than 2mm! **(d)** Tighten stem bolts slightly so stem clamp is snug but allows movement, then adjust headset to remove bearing play. Finish tightening stem bolts to prescribed torque specs.

The clamp bolts of RITCHEY stems are designed to oppose each other for proper load distribution during clamping. Always ensure that the bolt heads of RITCHEY stems are oriented in opposition to each other.







Headset Adjustment (Threadless Systems)

Adjusting headsets requires a certain amount of experience and expertise, and therefore should be left to your local RITCHEY dealer. Nevertheless, if you decide to adjust it yourself, read the headset manufacturer's user manual carefully before you do!

Loosen each of the stem's two directionally opposing steerer clamp bolts one to two complete turns. Using an Allen/hex key, gently tighten the countersunk adjusting bolt on top of the headset cap **(e)** until there is no play in the headset bearing, and the fork turns easily and smoothly inside the frame.

Don't tighten the countersunk adjusting bolt to its limit. It is only intended for adjusting play in the bearing.

Align the stem with the front wheel so that the handlebars do not veer at an angle from the wheel when it points straight ahead. Position yourself above the top tube, and sight down the stem and front wheel to check alignment.

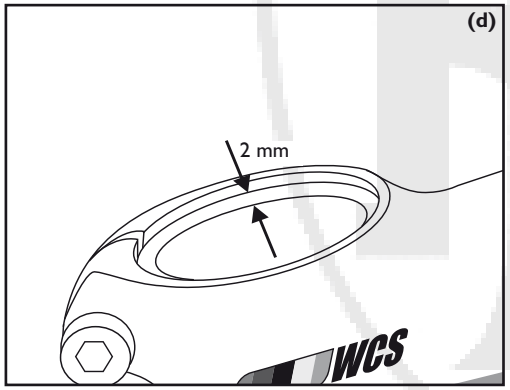
Using a torque wrench, alternate tightening the stem's clamp bolts to a minimum of 4 Nm. **(f)** If the stem is not well secured, increase to 5 Nm, or until the RITCHEY Torqkey clicks. You should not be able to turn the stem relative to the fork after tightening the bolts. If there is still movement, don't go beyond the maximum permissible torque! Instead use RITCHEY Liquid torque to increase friction to a satisfactory level.

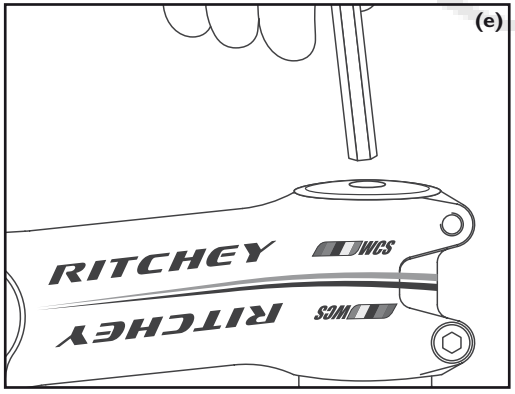
With carbon steerer tubes, be sure that the inside of the tube is supported by an expander-cone mechanism (for adjusting the play) before you tighten the clamp! Have a close look at the fork manufacturer's manual before you tighten the stem!

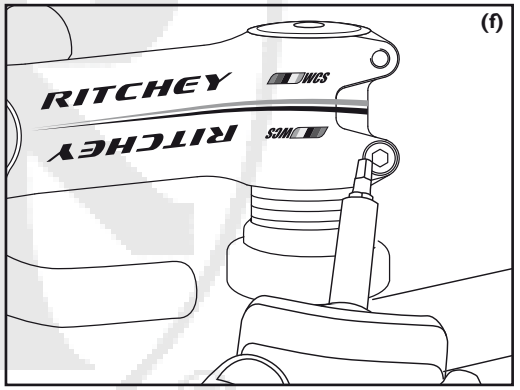
Check the headset for play as described in your bikes user manual. **(g)** Take care not to tighten the bearing too much, as this could easily destroy it.

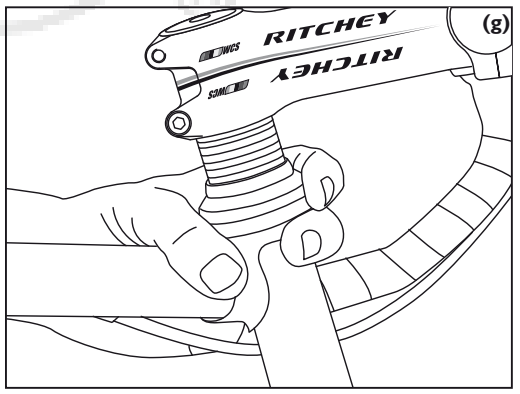
Check the secure clamping of the stem by holding the front wheel between your knees and trying to twist the handlebars against the front wheel. A loose stem can lead to an accident.

If the stem can not be tightened in place with 5Nm of torque, even when using RITCHEY Liquid Torque, stem and fork are incompatible. Switch to another fork or stem model, or consult your local RITCHEY dealer for assistance.









Handlebar Installation

Before proceeding with installation, be sure the stem and handlebar have the same clamping diameter.

For example, only stems with a clamping diameter of 25.8mm should be paired and used with handlebars having a 25.8mm clamping diameter.

Position the stem clamp directly in the middle of the handlebar clamp area, so that the handlebar extends the same distance from the stem on each side. If the handlebar does not slide easily into the receiving portion the stem, without requiring force and without play between the two components, seek the help of qualified mechanic to determine whether the two parts are compatible.

The handlebar on a mountain bike usually has a mild curve from the clamp area to the bar's outer ends. Rotate the bar until its position allows your wrists to be relaxed and one that doesn't cause your elbows to flare outward.

The straight portion – or ends – of a road handlebar's drops should be parallel to the ground or slant slightly downwards toward the ground. **(e)**

Insert handlebar into the stem and place the stem's cap – or faceplate – over it. Then thread the pre-greased bolts through the faceplate and into the stem by hand. With the RITCHEY Torqkey, or other quality torque wrench, gently tighten all four bolts alternately, just a turn or two at a time, until they are snug, ensuring visually that the upper and lower clamping slots represent the same width, and keeping within prescribed maximum torque specifications. **(a)**

Then tighten the fixing bolts alternately in a cross pattern until each is tightened to the manufacturer's prescribed torque.

RITCHEY stems with 4-bolt faceplates have a maximum recommended clamp bolt torque of 5 Nm. **(b)** Use the RITCHEY 5 Nm Torqkey to ensure proper bolt torque. Always use the prescribed torque values printed directly on RITCHEY stems.

Check shifter and brake lever clamps for burrs and sharp edges. Do not use shifters or brakes with burrs or sharp edges, as they can cut or make indentations in handlebars, possibly causing bars to fail. If you identify burrs or sharp edges, seek the help of an authorized RITCHEY dealer to determine whether or not they can be safely removed. If so, have your RITCHEY dealer or other qualified mechanic remove them. Loosen clamping bolts completely to ensure clamps are open all the way before sliding them onto the handlebar.

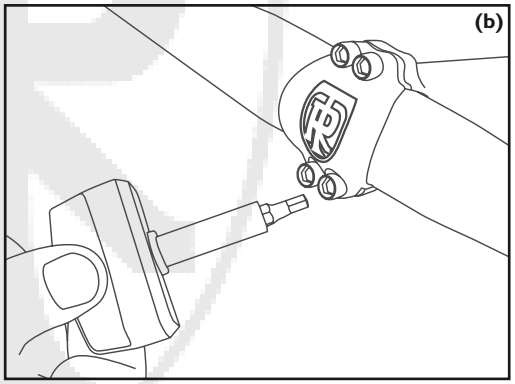
With Dual Control, Ergopower or DoubleTap road bike levers, loosen clamp bolts completely before sliding the levers onto a handlebar.

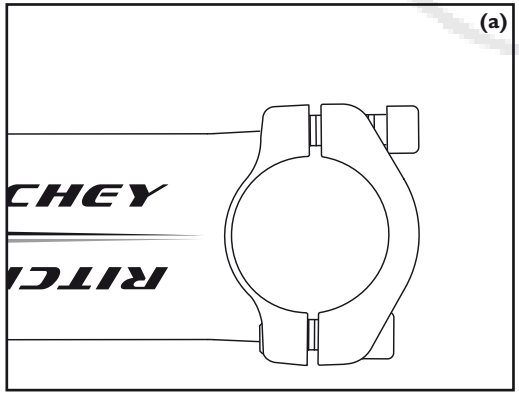
Initially tighten clamp bolts only slightly, so that the levers can still rotate freely. Adjust levers to desired position, then tighten clamp bolts to prescribed torque and ensure sufficient hold. **(c)**

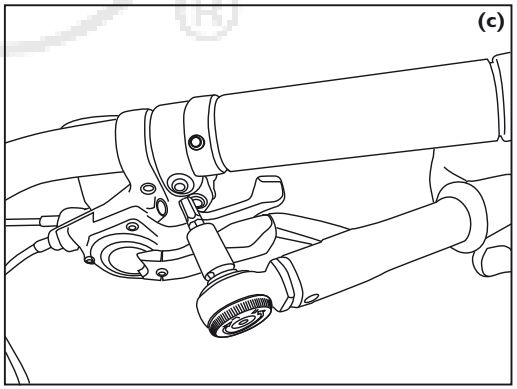
Never rotate levers on a handlebar after you have significantly tightened the clamp bolts, or you will scratch its surface, marring the finish and potentially stressing the material.

Be sure to read each component manufacturer's user manual before using these instructions to guide you!

Never shorten carbon mountain bike handlebars by cutting off the ends, because handlebar ends are generally reinforced where brake and shifting levers are installed. Shortening a handlebar by cutting off the ends can damage the bar and cause it to fail during use! Any modification to any RITCHEY carbon product will void the warranty.







Mountain Bike – proper positioning of grips and levers

If your grips have the locking feature, loosen the bolt. Sit on the saddle and place your hands on the grips with your fingers on the brake levers. The back of your hands should form a straight line with your forearms, so adjust the position of your levers accordingly. Then adjust your grips to the correct anatomical position. **(d)**

Road Bike – proper positioning of handlebar

The flat ends of the handlebar drops should be parallel to the ground or orientated slightly downward. **(e)**

Check whether handlebar is firmly clamped in stem by attempting to rotate it. The handlebar should not rotate in the stem clamp. **(f)**

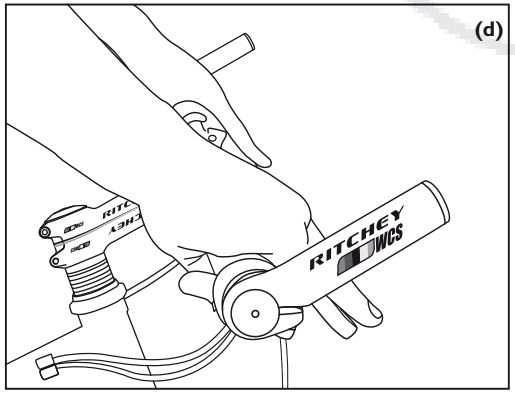
After positioning and clamping your handlebar in the stem, tighten the shift/brake lever clamps to recommended torque. Never exceed the manufacturer's recommended torque. (At the time this manual was written, recommended torque was: Shimano 6-8 Nm, Campagnolo 10 Nm, Magura 4 Nm, Hayes 3-4 Nm).

If there is movement, verify that each bolt has been alternately tightened to the recommended torque, which for RITCHEY stem clamp bolts is 5 Nm. If 5 Nm of torque have been applied to each bolt and clamp hold is still not sufficient, loosen bolts, remove bar from stem, apply RITCHEY Liquid Torque to clamp areas and tighten each bolt alternately again until 5 Nm of torque is applied to each. If the bar is still not securely held by the stem, seek the assistance of a RITCHEY dealer or other qualified mechanic.

Prologue Base Bar

Install the RITCHEY Prologue Base Bar as described for handlebars, above, ensuring that the flat sections of the bar's forward drops are parallel to the ground or tilted slightly upwards.

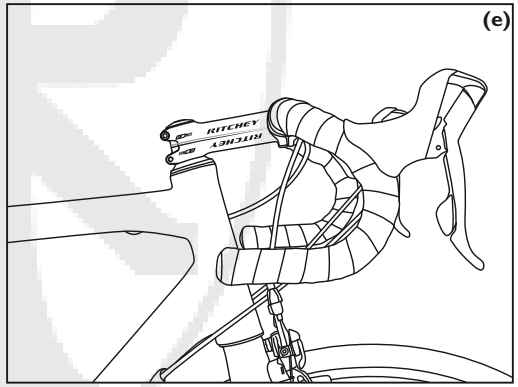
The brake cables should run along the front side of the bar as usual. Campagnolo Ergopower shift cables can be run externally along the bars, or internally through the bars.

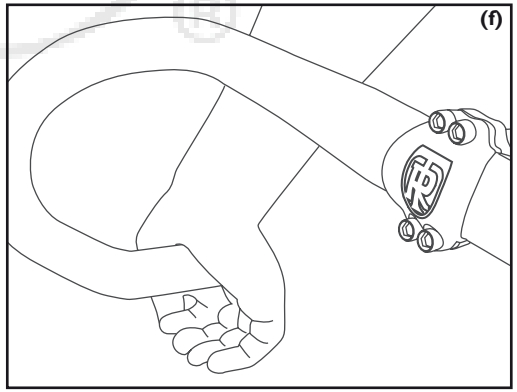


The Prologue Base Bar is compatible with Shimano Dual Control, Campagnolo Ergopower and SRAM DoubleTap brake/shift levers. Most time-trial-specific brake levers are also compatible with the Base Bar, while most bar end shifters are compatible with our carbon and alloy aero extensions. Check each manufacturer's user manual to be sure.

If the handlebar cannot be secured in the stem, even when RITCHEY Liquid Torque has been applied to clamp areas and a torque of 5 Nm has been applied, handlebar and stem are incompatible. Replace handlebar or stem with an appropriate model. In order to ensure compatibility and safety, RITCHEY recommends using only RITCHEY components together!

Never exceed stem, handlebar, lever or fork manufacturer recommended torque. Check all bolts after the first 200-400km (120 – 240 miles), then adjust as needed, keeping within the prescribed torque limits. Check every 2,000km (1,200 miles) thereafter. Overly loose or overly tight bolt connections can cause an accident!





Bar End Installation

Bar ends add more hand positions to your handlebar configuration. They are usually set to a position that provides more leverage and more comfort when you pedal out of the saddle.

RITCHEY bar ends are designed to be used with all RITCHEY MTB handlebars – alloy or carbon.

If you intend to install RITCHEY bar ends on a non-RITCHEY handlebar, please make sure your handlebar is designed for use with bar ends.

Clamping bar ends on a non compatible handlebar – one whose tubing has very thin wall thicknesses, for example – can lead to handlebar failure during use and can therefore cause an accident!

Pay attention to sharp burrs and sharp edges at bar end clamping areas. Don't use bar ends with burrs or sharp edges! Burrs are sharp and can cut into components. If you do discover burrs or sharp edges, seek the assistance of your local RITCHEY dealer or other qualified mechanic.

Loosen the brake and shift lever bolts two or three complete turns. Move the levers toward the stem to ensure the bar ends have sufficient clamping space. If the grips have end caps, cut them so you can move the grips toward the stem, as well. Do not use any liquids or grease to loosen the grips; if necessary, use compressed air to loosen them.

Now loosen the bar end bolts two or three complete turns.

Slide each bar end onto its designated side of the handlebar, indicated on each bar end. **(a)**

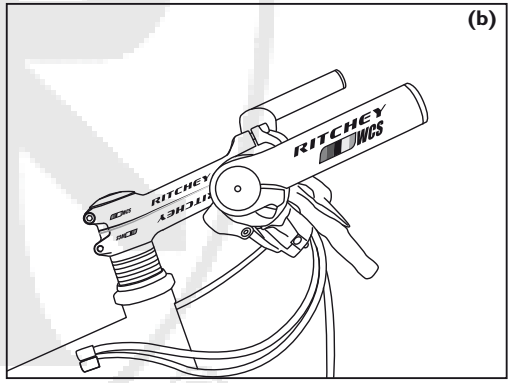
Angle the bar ends according to personal preference, then confirm they are both at the same angle. **(b)**

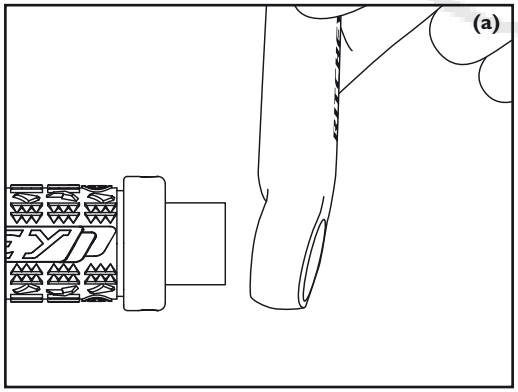
Tighten the bolts slowly, increasing torque in increments of .5 Nm, if possible. Do not exceed maximum torque of 5 Nm on RITCHEY bar end bolts, or on other manufacturers' bar-ends being used with a RITCHEY handlebar. Furthermore, never exceed the maximum torque printed on a bar end or any other component. **(c)**

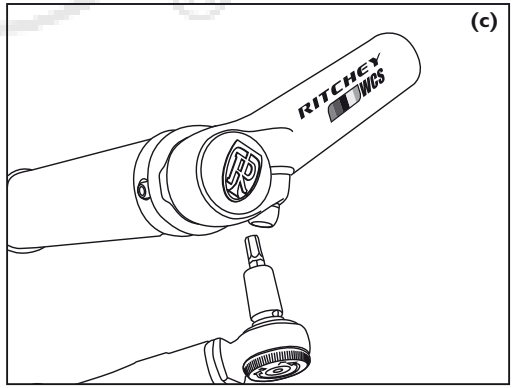
If the bar ends can't be secured reliably even when using RITCHEY Liquid Torque on the clamping surfaces, they may not be compatible. Seek the advice of an authorized RITCHEY dealer. You may need to switch to another pair of bar ends or another handlebar.

The interfacing clamping areas of stems, handlebars, bar ends and brake levers must be tightened to specified torque settings.

Mounting bar ends to a non-suitable handlebar can lead to sudden failure during use and therefore could cause an accident. Many handlebars made of thin-walled aluminium or carbon fiber may not be suitable for use with bar ends. Consult manufacturer documentation to be certain.

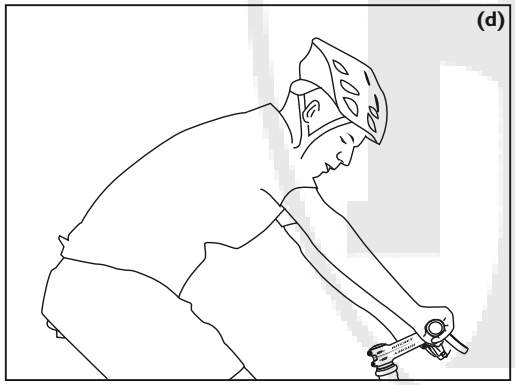


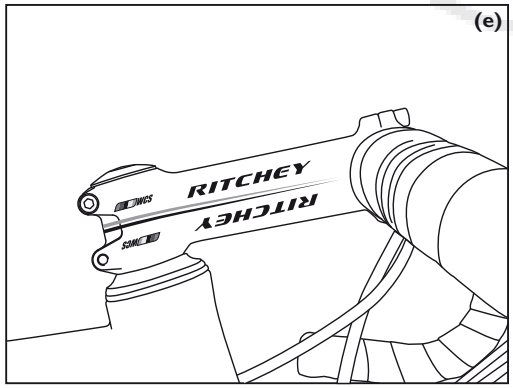




Handlebar Height Adjustment

Handlebar height will determine how much your upper body bends forward. **(d)** Lowering the handlebars gives the rider a streamlined position and may put distribute more of the rider's weight over the front wheel. An excessively low handlebar position may prove less comfortable, especially on longer rides, and can strain wrists, arms, upper body and neck. Seek the assistance of a qualified bike fit expert, especially if you experience pain or discomfort after set up and use. FIT LOGIC BY RITCHEY posters are displayed at participating RITCHEY dealers, and provide an overview of RITCHEY available RITCHEY products and sizes to accommodate position and fit needs.





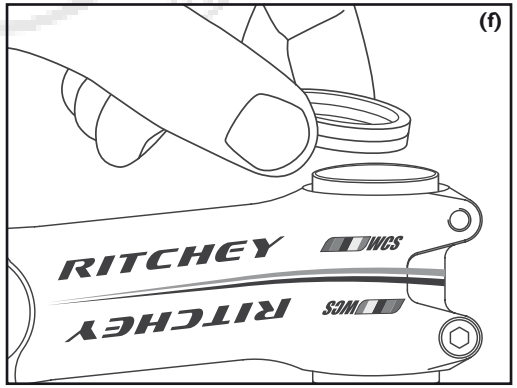
Aheadset Stems – Height Adjustment Using Spacers

On bikes using a threadless headset system, or Aheadset system, **(e)** the stem is an integral part of bearing adjustment and pressure. If you change the position of the stem you must also readjust the bearings (see the section on "Adjusting the Headset"). The vertical position of the stem is determined by the implementation of spacers. In the case of flip-flop models it is also possible to invert the stem in order to achieve a higher or lower handlebar position.

Loosen the headset cap bolt at the top of the fork's steerer tube. This cap serves to adjust the initial bearing pressure. Remove the cap and loosen the stem's steerer clamp bolts, then pull the stem up and off the steerer tube. Now you can reposition spacers on the steerer tube above and below the stem in order to position the handlebar at the desired height. **(f)**

Check to ensure that all parts are firmly seated, as described above.

If you would like to remove spacers permanently after determining your ideal position, you will need to have the steerer tube shortened (i.e. cut) by an authorized RITCHEY dealer or other qualified mechanic. This change is irreversible. Otherwise, you can avoid shortening the steerer tube by simply repositioning spacers, placing the equal amount of spacers above the stem that you removed from below the stem, and vice versa.



Adjustable Stems

RITCHEY adjustable stems **(a)** allow handlebar height to be modified by raising or lowering the front part of the stem.

When you adjust the handlebar height you will need to adjust the headset, as well. If you feel uncertain about this procedure contact your local RITCHEY dealer for help.

Loosen the single bolt **(b)** that positions the stem's front end, unthreading it completely from the stem. Separate the two clamp halves **(c)** just enough to allow the front end of the stem to be positioned higher or lower according to preference, then pull the two clamp halves back together **(d)**, insert the threaded bolt and tighten to correct torque specification.

After adjusting the stem position, you will probably need to modify the orientation of the handlebars, as described in the section, "Handlebar Installation".

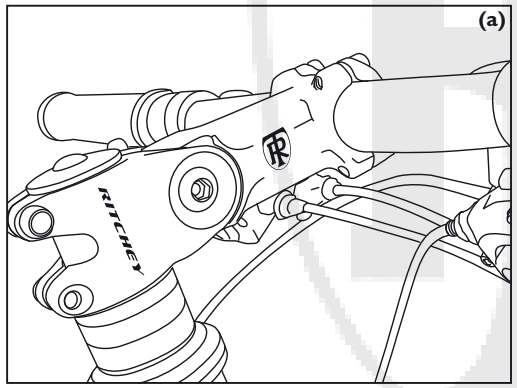
Orientation of the handlebar can be adjusted by loosening the stem's handlebar clamp (i.e. the cap), rotating the bars to the desired position, and tightening the handlebar clamp to 5 Nm.

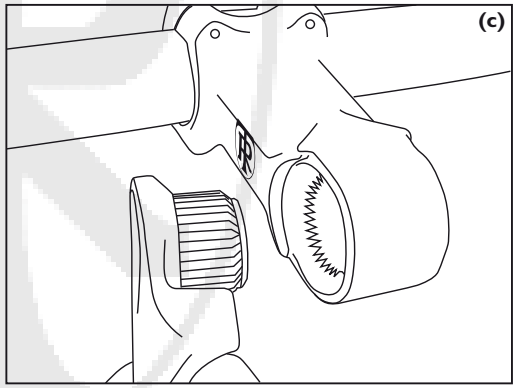
Then you will need to adjust the headset as described in the section, "Headset Adjustment".

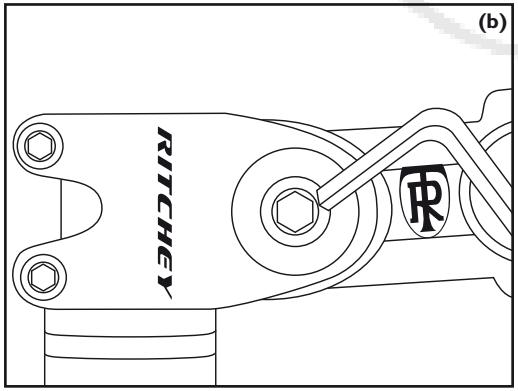
Changing the position of the stem alters the position of the handlebars, as well as the brake and gear levers. Readjust these as described in the section, "Handlebar Installation".

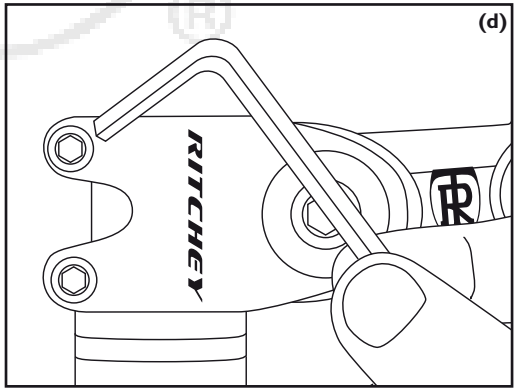
The stem's handlebar clamp bolts must be tightened to specified torque values.

If you disregard the prescribed torque values, the handlebar or stem may break or come loose.









Aero Bar Installation and Adjustment

Hammerhead Carbon TT Bar

The Hammerhead bar must be fitted to a stem as described in the section, "Handlebar Installation". Note that the handlebar must be orientated parallel to the ground or slightly upward.

The length of the stem might need to be different from the length you use with standard road handlebars. Take time to determine the best position, and consider asking your RITCHEY dealer for assistance.

The Hammerhead bar is not compatible with Shimano Dual Control, Campagnolo Ergopower or Sram DoubleTap brake/gear levers. Special time trial brake levers and bar end shifters are required!

Open the clamps on the underside of the bar and insert the aero extensions. **(e)** The curved extensions should be orientated so that the RITCHEY branding is visible on the outer sides.

The extensions can be slid forward or backward to achieve the desired position. When you determine the appropriate length, tighten the clamp bolts in half turn increments until the extensions are tight and can't be moved. Do not exceed 5Nm of torque.

Remove both forearm rests completely, then loosen both support handlebar clamp assemblies. Slide the arm support assemblies until you achieve desired width, then tighten assembly bolts to 5Nm. **(f)**

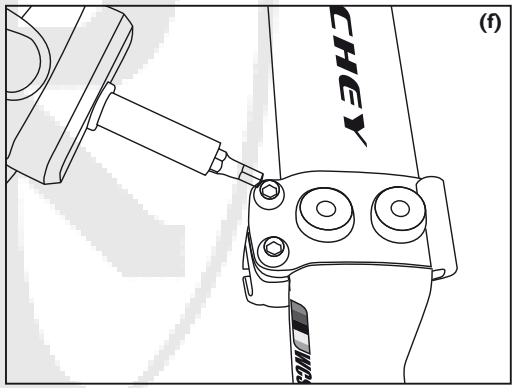
Be careful not to overtighten arm support clamp assembly bolts. **(g)** The elliptical shape of the carbon base bar provides a secure clamp without excessive torque. Then slowly and gradually tighten forearm rest bolts.

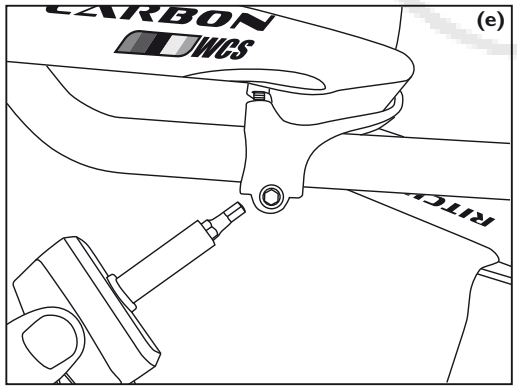
Read brake and gear lever manufacturer user manuals and/or instruction sheets before proceeding with installation based on this user manual!

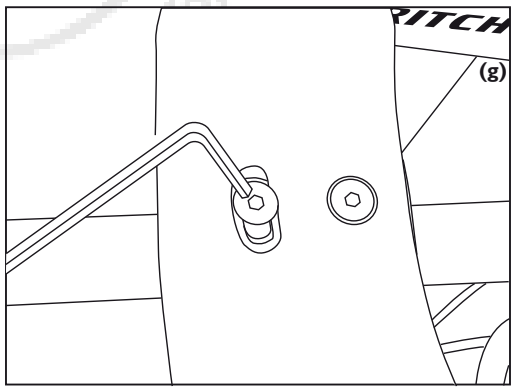
The brake lever cables run internally through the bar for the first few centimetres before exiting the predrilled hole. The bar end shifter cables are mounted externally along the aero extension.

Once you have established your desired riding position, it might be necessary to shorten the extensions. This job must definitely be performed by your local RITCHEY dealer!

Once you've established desired hand positioning, wrap those areas with RITCHEY bar tape to achieve satisfactory grip.







Probiscus Aero Bar

The Probiscus Aero Bar has an integrated stem that needs to be mounted onto the steerer tube of the fork as described in the section, "Installation of Aheadset Stems" section. The Aero Bar can be adjusted along the stem to the desired position.

Loosen the two bolts on the underside of the bar two or three turns. **(a)** Shift the bar forward or backward according to your needs. If you have found your desired position, tighten the clamp bolts in half turn increments until the bar can't be shifted forward and backward any more. Do not exceed 5 Nm of torque.

Take the necessary time to determine your correct position, and ask your dealer for assistance.

The bar assembly is compatible with Shimano Dual Control, Campagnolo Ergopower or Sram DoubleTap brake/gear levers. Special time trial brake levers and bar end shifters can be mounted alternatively!

Loosen the bolts of the aero extension clamps two or three turns.

The curved extensions must be orientated so that the ends point upward. The ends can slant slightly to the inside if this is your need. In addition, the clamp can be slid backward or forward so you can find a position that is a good balance of comfort and aerodynamics.

Once you have determined desired extension and angle, tighten the clamp bolts in half turn increments until the extensions are held firmly and don't move. Do not exceed 6 Nm of torque. **(b)**

Make sure the aero extensions and stem pass through the clamp – along its entire length – completely! Otherwise the aero bar can fail during use.

Loosen one arm rest totally by unscrewing the bolt.

Loosen the two bolts of each arm support two or three turns so they can be shifted around to achieve a good balance between comfort and aerodynamics.

If that does not provide sufficient adjustment possibilities, unscrew the bolts and take the parts apart.

Reinstall them **(c)** in a way that satisfies your needs. Be aware that all parts fit together via their round contact surfaces.

Tighten the two adjustment bolts with the minimum necessary torque.

Mount the arm supports and be aware that all parts fit together via their round surfaces. Turn them and/or shift them forward or backward to achieve a comfortable position. Then tighten the bolts. Do not exceed a maximum torque of 5 Nm on all three arm support bolts.

Adjust each arm support the same way.

Put back the pads on the arm rests.

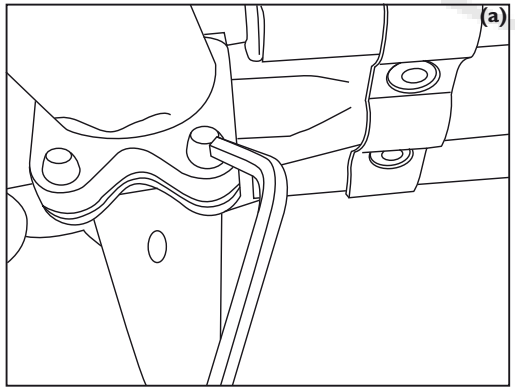
Verify that the extensions, arm supports and arm rests stay in their position, by trying to twist them by hand.

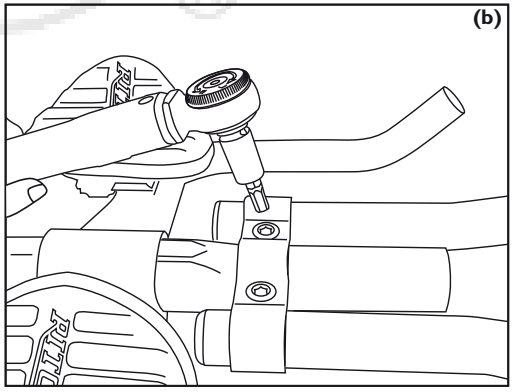
Read the brake and gear lever user manuals the manufacturers supplied with these parts, before you start mounting according to these instructions!

The brake lever cables run on the front side of the bar, as usual. The Campagnolo Ergopower shift cables run externally for the first centimeters on the outside, and then run inside the bar, exiting through the pre-drilled hole.

Once you have established your desired riding position, it might be possible to shorten the extensions to reduce weight. This job must definitely be left to your dealer!

Wrap the areas with RITCHEY bar tape where your hands will be positioned while riding in order to achieve satisfactory grip.





Prologue Clip-on Bar

RITCHEY Prologue Clip-on Aero Bars can be used on the 31.8 WCS Carbon Evolution or 31.8 Pro Matrix Logic road bars, however these are the only Ritchey O/S road bars approved for clip-on use.

Ritchey road bars with 25.8-26.0 diameter can be used with clip-on aero-bars.

To mount the Clip-on Bar, unscrew the two bolts on the underside of the arm support clamps and disassemble.

Lay both parts around the handlebar and take care that the parts fit into each other. Insert the bolts and turn them two to three turns with your fingers so the clip-on can still be moved relative to the bar.

Position the aero extensions so they are parallel to the ground or point a little upwards.

Tighten the bolts to 6 Nm.

Open the aero extension clamps and shift them forward or backward according to your needs. The curved extensions must be orientated so that the front ends point upward. The ends can point slightly to the inside if this is your preference.

Once you have found a satisfactory position, tighten the clamp bolts in half turn increments until the extensions don't move. Do not exceed 6 Nm of torque.

Take time to determine an appropriate position and ask your dealer for assistance.

Make sure that the aero extensions run through the clamp completely – i.e. along its entire length! Otherwise the aero bar can fail during use.

Remove the pads from the arm rests.

Loosen one arm rest completely by unscrewing the bolt.

Loosen the supports' two bolts two or three turns so they can be loosened sufficiently to alloy them to be shifted around to achieve a good balance between comfort and aerodynamics.

If that does not give you sufficient room for adjustment, unscrew the bolts and disassemble.

Remount and position them **(c)** according to preference. Be aware that all parts fit together via their round contact surfaces.

Tighten the two adjustment bolts to as low a torque as possible to achieve proper clamping force.

Reinstall arm supports and be aware that all parts fit together via their round contact surfaces. Turn and shift them forward or backward into a comfortable position. Then tighten the bolts. Do not exceed a maximum torque of 6 Nm on all three arm support bolts.

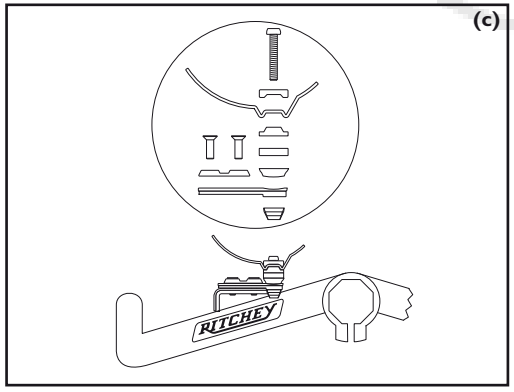
Adjust both arm supports the in same way.

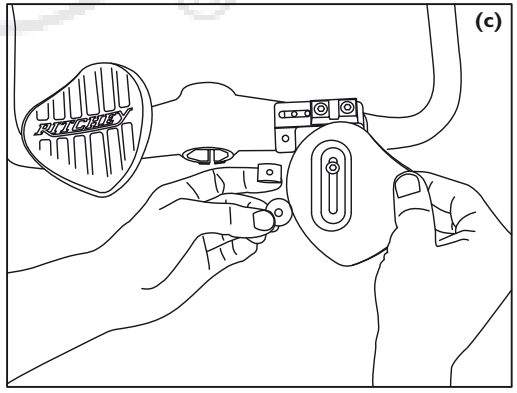
Put the pads back on the arm rests.

Check to see if extensions, arm supports and arm rests stay in position when you try twisting or moving them by hand.

Once you have established your desired riding position, it might be possible to shorten the extensions to reduce weight. This job must definitely be left to your dealer!

Wrap the areas with RITCHEY bar tape where your hands will be positioned while riding in order to achieve satisfactory grip.





Grips and Bar Tape

Grips and bar tape provide comfort, but also have a very important secondary function: they ensure that your hands' movements communicate clearly with the steering components! Make sure your set of grips or bar tape is in good, functional condition for precise steering and control.

Installing Grips

RITCHEY grips must be mounted on the handlebar free of dirt, oil and grease to ensure proper adhesion.

(1) Speedmax locking grips can be mounted easily by sliding onto the handlebar. **(a)** Take care that the clamping mechanism is orientated toward the bar end. Mount so the grip and handlebar ends are flush. When correctly positioned tighten the set screws until the grip can't be turned any more. Do not exceed a torque of 3 Nm.

(2) All other RITCHEY grips adhere to the handlebar due to friction between the bar and grip. The easiest way to mount these grips is with compressed air. Inflate the grip with air, and then slide it onto the bar. If you don't have compressed air, please contact your dealer to perform this job for you. We discourage the use of hairspray and comparable solvents! These can cause the grips to loosen during use.

With all types of grips designed with an open end, you must push plugs into the ends of the bar. This will avoid or at least reduce potential damage to the bar and, more importantly, injuries in the case of a crash.

Make sure the handlebar is free of any lubricants, and do not use chemical fluids to mount the grips!

Wrapping Handlebar Tape

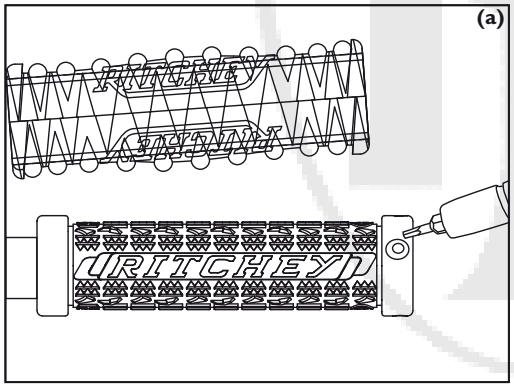
Clean the handlebar of all dirt, old tape glue and grease.

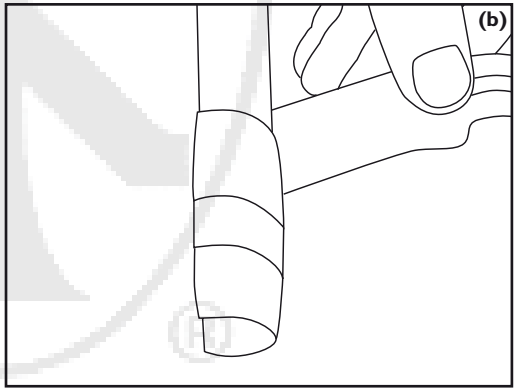
Start wrapping the bar at the bottom – i.e. at the open end of the drop. The first wrap around the bar should be positioned such that half of the tape is overlapping the end of the bar. **(b)**

Proceed inward/upward with the tape angling and partially overlapping the previous wrap, and so on. Hold the tape under tension during the complete wrapping process, removing the paper backing from the adhesive as you go.

Position a short piece of bar tape on the rear side of the lever and over its clamp around the bar so you will not have an "unwrapped area" as you wrap past the lever. Stop wrapping at the top of the bar before reaching the branding graphics, leaving the bulge/clamp area uncovered. Finish by taping the final wrap of bar tape with electricians adhesive tape.

Tuck the overlapping bar tape you left at the beginning into the open end of the bar, and insert a plug. Repeat this process on the other side.





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RITCHEY Corporate HQ's
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Sparks, NV 89431

RITCHEY Design Inc.
Sales & Warranty Office
575 Old County Road
San Carlos, CA 94070

Contact your national distributor at www.ritcheylogic.com

Warranty Terms

Under European consumer law, the purchaser has full statutory warranty rights within the first two years from date of purchase. In North America, these rights apply to the first year from the date of purchase. According to these laws, your dealer is responsible for ensuring the product is free of defects that could cause premature wear from normal use.

The new European warranty law is valid in countries where European (EU) regulations apply! Please determine implications for use in your country.

Warranty claims will only be accepted if the bicycle has been used solely for its intended purpose (see section, "Before your first ride").

It does not cover damage resulting from wear, neglect (insufficient care and maintenance), accidents, overstress caused by overloading, incorrect installation, improper treatment or as a result of modifications made to the component.

Be sure to follow all assembly instructions in this manual precisely, as well as all additional instructions provided by the manufacturers of products used in conjunction with RITCHEY products, especially bolt torque specifications and prescribed maintenance. Observe all instructions with regard to procedures and verification processes listed in this manual, as well as any other instructions that may be included in the delivery of RITCHEY products. Also adhere strictly to any and all instructions pertaining to the replacement of safety-relevant components, such as handlebars, bar ends etc.

Your direct contact with regard to all issues outlined in this manual and corresponding instructions is your local RITCHEY dealer, who should be qualified to answer your questions. In order to obtain assistance from a RITCHEY dealer, you may be required to show your receipt.

YOU MUST CONTACT YOUR RESELLER IF YOU HAVE A WARRANTY ISSUE OR CONCERN, I.E. THE RITCHEY DEALER WHO SOLD YOU THE BICYCLE COMPONENT IN QUESTION. RITCHEY has exclusive agreements with all of our reseller partners to service potential warranties. If you purchase a RITCHEY product from an unauthorized reseller (example: an auction site), you have no recourse through RITCHEY or one of its authorized resellers, so you must seek resolution with the reseller who sold you the product.

A Note On Wear

Components on bicycles are subject to wear due to normal and proper use. The rate of wear will depend on care and maintenance, the bike's usage and the environment it is exposed to, such as rain, mud, dust, and sand. Some components require regular care and maintenance, but despite the best maintenance program, all components will eventually reach the end of their serviceable life, depending on conditions and intensity of use.

The following RITCHEY parts are especially subject to wear due to the nature of their intended use, and are not covered for wear under this warranty:

Grips and bar tape, which are subject to compression, abrasion and contamination.

Manufacturer's Guarantee

RITCHEY products have been developed and manufactured with great care and have gone through numerous testing controls. Our products are examined as part of our internal quality control process to meet strict standards, as well as by external, neutral test laboratories.

For the EU market we grant, independent of legal regulation, a voluntarily guarantee that your RITCHEY product is free of defects for 2 years from date of purchase.

For the North American Market we grant, independent of legal regulation, a voluntarily guarantee, that your RITCHEY product is free of defects for one year from date of purchase. (Except grip and bar tape, as clarified above.)

This manufacturer's guarantee only applies to claims made by the initial buyer, who must present the purchase receipt, with date of purchase, dealer address and model number. Guarantee claims will only be accepted if the bicycle has been used in accordance with the intended use of RITCHEY products.

This quarantee does not cover damage resulting from:
- wear
- neglect (insufficient care and maintenance)
- accidents
- overstress caused by overloading
- incorrect installation or improper treatment
- changes or modifications to the component (example: cutting the handlebar).

The instructions in this and all RITCHEY manuals are carefully designed to maximize the life of RITCHEY products. Any guarantees are void if installation instructions are ignored and/or if regular inspection and maintenance intervals are neglected.

In the case of a warranty claim, RITCHEY reserves the right to provide all or part of the current successor model in an available colour – or if such part is not available, a higher grade model – to remedy the claim. The guarantee does not cover assembly, refitting costs or any new accessories that may be required (example: different dimension part).

The guarantee does not cover labour and transport costs, nor does it cover follow-up costs resulting from defects.

Your direct contact for any issue should be your RITCHEY dealer/reseller, who is authorized to respond to your inquiries.

Technical details in the text and illustrations of this manual are subject to change.

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